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ABSTRACT

This paper shows that policymakers and researchers have changed their views about school improvement and the role of teachers in the process, suggesting that educational reform initiatives challenge classroom teachers to make sense of new policies, ideas, programs, and their own work. It examines calls for reform, highlighting: the 1957 launch of Sputnik, after which Americans questioned public school quality; the 1983 publication, A Nation at Risk, which called for school reform; the 1989 Governors' education summit, which set the stage for two important reforms; and the 1995-96 Third Annual Mathematics and Science Study, which showed that America has not yet reached its mathematics and science achievement goals. The paper notes that teachers need more help as new conceptions of reform and teacher learning become more popular. It discusses directions of change, emphasizing: a systematic approach to school reform, providing teachers with opportunities to learn, and improving the quality of teaching through teacher learning. The paper proposes that supporting teachers in their development of a stance toward their practice which emphasizes learning and learners can promote instructional coherence and improved student learning. It examines six dimensions of teachers' work: knowledge, professionalism, collaboration, instruction, agency, and authority. (Contains 44 references.) (SM)

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Instructional Coherence

The Changing Role of the Teacher

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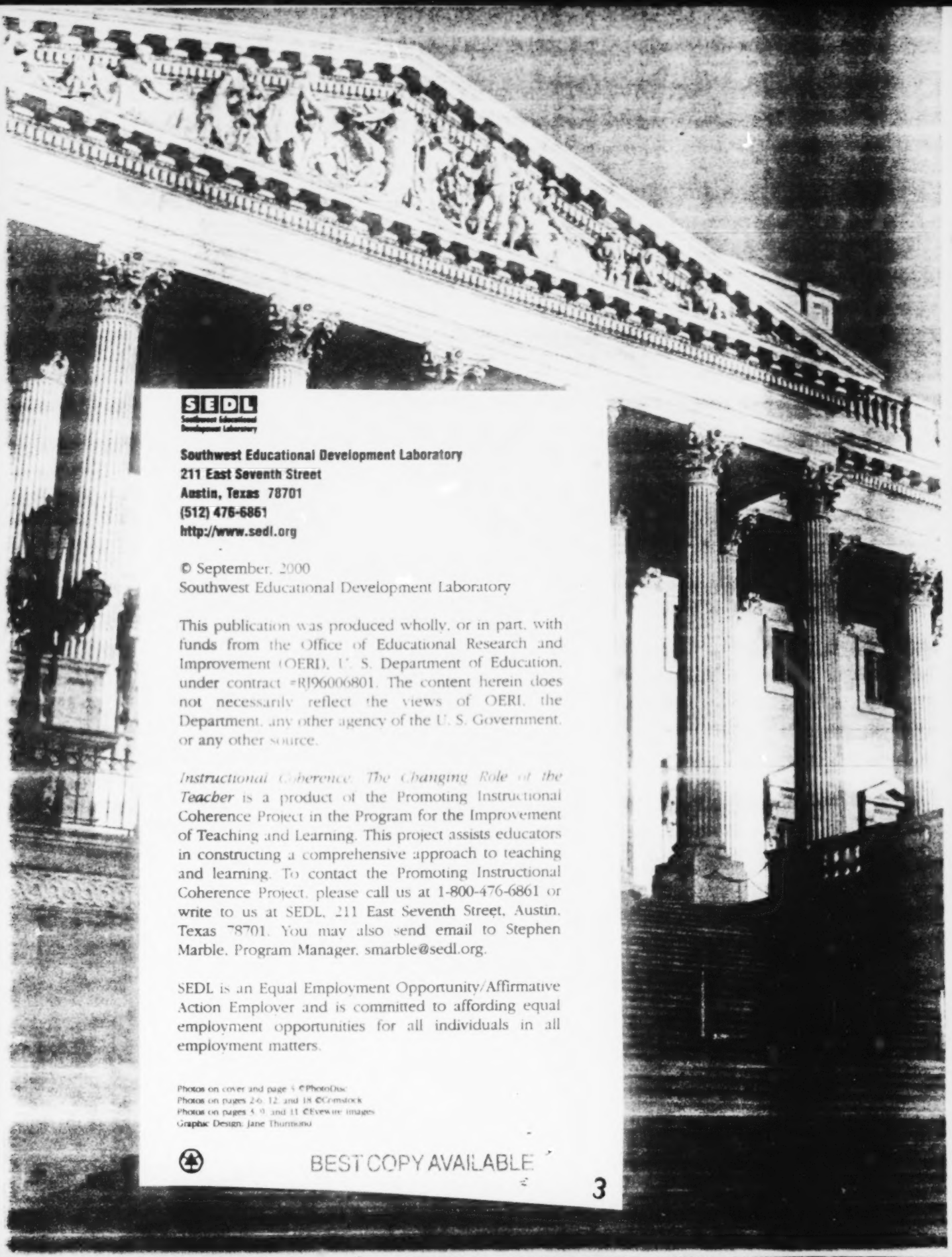

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Instructional Coherence

The Changing Role of the Teacher

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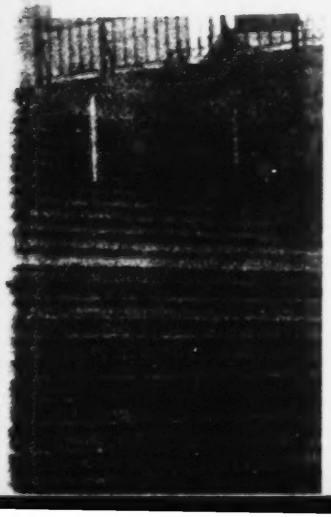
September, 2000



The science curriculum guide says to cover electricity and magnetism, but gives little specific guidance for someone like Sonia, a second-year teacher with little science background. She has the batteries and bulbs box (from the district's materials center) and thinks the hands-on activities and worksheets in the box will be a good way to start an electricity unit. She directs her students to pair up, get their materials and worksheets, and work on the tasks outlined on the worksheets. Most of the students quickly figure out how to do the tasks, and Sonia reminds them to answer the questions on the worksheet. The students are enjoying the activities. Some visit other groups to see different strategies, and others extend the ideas by using a metal button or two bulbs. Suddenly, Sonia collects the materials and tells the students to get out their science textbooks. They read aloud from the textbook that uses many scientific terms, and Sonia does not refer back to the activities. She gives the students a reading assignment and questions to answer for homework.

The students were getting noisy, not following the worksheet, and asking questions Sonia felt unprepared to answer. She became unsure of what was happening, so she gathered up the materials and went back to the textbook. Sonia says that the curriculum and standards documents don't really help her decide how to teach electricity. She knows she should use more student-centered hands-on activities, but she doesn't know how to make it work in her classroom. She is confused and disappointed because she knows the lesson was incoherent and did not help students understand the topic.

This is not an uncommon scenario. Teachers are facing an avalanche of frequently disconnected calls to reform, to do things differently. The pressure to change practice may come from many sources at the same time: state adoption of new student assessments, school participation in a reform program, and advocacy of new teaching strategies by a workshop presenter or professional organization. The viewpoints of various educational "experts" about teaching, learning, and classroom practice are often inconsistent or even contradictory. In coming to grips with innovation and reform, teachers like Sonia are challenged to understand new theories of learning, new approaches to teaching, new policies, and a changing social context that affects students and communities.

Some teachers strive to "make sense" of both the inconsistencies and the new ideas when they make daily instructional decisions. Sometimes they are successful and create quality learning experiences for their students; sometimes they throw up their hands in frustration. Many other teachers make their decisions based on their immediate needs to comply, survive, conform, or meet a time constraint. They follow the textbook, teach to the test, give students worksheets to keep them occupied, or do the same lessons year after year. Most teachers follow this easier pathway at least some of the time. However, this path often leads teachers to unintentionally create learning environments that are not fulfilling for either students or the teacher.

Despite the literally thousands of efforts to improve schools since World War II, few have had significant or enduring effects on instruction and student learning (Cohen & Ball, 1999). A recent review of federally-funded research suggests that researchers, educators, and reformers now understand that "when curriculum, instructional materials, and assessments are all focused on the same goals—that is, when the policy systems that frame education are coherent—the prospects for educational improvement are enhanced" (Koppich & Knapp, 1998, p. 2). However, translating policy coherence into improved *instructional* coherence and student learning seems more elusive and complex than anticipated. As long as reform ideas continue to confuse and frustrate teachers, can we expect significant and enduring improvement in instruction and student learning?

In this paper, we show that policymakers and researchers have changed their views about school improvement and the role of teachers in the process. We suggest that educational reform initiatives challenge classroom teachers to make sense of new policies, ideas, programs, and their own work. We also note, however, that teachers should receive more help in their efforts as new conceptions of reform and teachers' learning become more popular. Finally, we propose that supporting teachers in their development of a stance toward their practice that is focused on learning and learners can promote instructional coherence and improved student learning. Specifically, we examine six dimensions of teachers' work: knowledge, professionalism, collaboration, instruction, agency, and authority.

Calls for Reform

While some teachers may remain isolated from the influence of current school improvement efforts, most probably find it difficult to avoid the issue. Reform is a major topic at state and national conferences, in professional and popular journals, in workshops and courses, and on national television news programs. Educational professionals and others with an interest in education are rethinking educational practice. Why is there such an emphasis on school reform at this time? Over the past 50 years, the push to dramatically change schooling has usually come in response to some perceived problem that is blamed on the failure of public schools to educate students.

The Launch of Sputnik

The launch of Sputnik by the Russians in 1957 was a wake-up call for Americans to question the quality of their schools, in particular, the ability of schools to produce scientists and engineers to meet the challenges of the space age and the cold war. In response, the U. S. Congress drastically increased funding to the National Science Foundation (NSF), which in turn funded science and mathematics curriculum projects and summer teacher-training institutes. An implied goal of the curriculum projects was to "identify talent and improve the education of elite students" (Ravitch, 1995, p. 48).

This reform was a top-down federally funded effort. To take the case of the NSF science curriculum projects, professional scientists and science educators developed the science curricula and schools and teachers had little input. The new materials were designed to be "teacher-proof" and were a significant departure from materials teachers had been using. While there was a sense of excitement and energy among a fairly elite group of scientists, science educators, selected science teachers, and talented science students, others felt overwhelmed, confused, or simply uninvolved. The legacy of the period is still with us in the form of the "stuff" of the projects —hands-on, inquiry-based science activities for students. However, by 1975, much of the federal involvement in pre-college mathematics and science education was withdrawn, and the shift in education was "back to the basics" with a spread of "minimum competency testing in dozens of states" (Ravitch, 1995, p. 49).

A Nation at Risk

Most educators agree that the 1983 publication of *A Nation at Risk* by the National Commission on Excellence in Education was similar in many respects to the launch of Sputnik—a new call for school reform. This report questioned the ability of the U. S. to compete in the global economy due to the "rising tide of mediocrity in our schools" (National Commission on Excellence in Education, 1983, p. 5). It described our curriculum as diffuse, our expectations for students as low, and our students' test scores as declining. The report spurred a decade of activity as "proponents of reform began to make a close link between the financial security and economic competitiveness of the nation and our educational system" (Marzano & Kendall, 1996, p. 2).

The Excellence Movement, the first wave of reform following publication of *A Nation at Risk*, saw states increasing high school graduation requirements, adding more time to the

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school year, instituting new statewide testing programs, offering more Advanced Placement courses, promoting classroom use of technology, and establishing new teacher evaluation programs (Tirozzi & Uro, 1997). In other words, the initial response was to do more, not to do things differently (DuFour & Eaker, 1998). By the late 1980s, enrollment in advanced classes had increased and performance in math and science had shown modest gains. This wave of reform was seen as an encouraging effort by some (Finn & Ravitch, 1996), but others considered it a failure (DuFour & Eaker). Student performance in reading and other subjects remained low, the performance gap between white and minority students was unacceptably large, and employers and colleges reported that it was necessary to provide remedial courses or training for high school graduates (Finn & Ravitch; Tirozzi & Uro).

Large-scale national and international studies and assessments[1] provided empirical evidence that U. S. students were still not performing well compared to students in many other countries. Overall achievement scores by U. S. students were disappointingly average, a fact that caused concern since the U. S. economy was becoming more tied than ever to global competition.

1 Examples of these studies include the National Assessment of Educational Progress (NAEP) given since 1970, the Second International Mathematics Study (SIMS) conducted in 1982, and the International Assessment of Educational Progress (IAEP) conducted in 1991.

Governors' Education Summit

Growing concerns about the academic preparation of students prompted the nation's governors to hold the 1989 Charlottesville Education Conference. A call was issued for both states and the federal government to take a significant role in improving education. The governors affirmed that education is a state's responsibility and a local function, but charged the federal government with providing financial assistance, leadership, and support for a national school improvement framework. This second wave of reform involved "raising academic standards; measuring student and school performance against those standards; providing schools and educators with the tools, skills, and resources to prepare students to reach the standards; and holding schools accountable for the results" (Tirozzi & Uro, 1997, p. 242).

The educational summit set the stage for two parallel efforts. The first was the movement to establish national educational goals and standards. President Bush announced six national education goals in his 1990 State of the Union address. One goal was for the U. S. to be first in the world in mathematics and science achievement by the year 2000 and another set the stage for establishing content standards. The general consensus was that standards should reflect high expectations, provide focus and direction, and be national (not federal), voluntary (not mandatory), and dynamic (not static). A new system of multiple assessments should developed that were voluntary and developmental (Ravitch, 1995). Mathematics standards, released by the National Council of Teachers of Mathematics (NCTM) in 1989, preempted the public mandate for standards and served as a model for other professional organizations to develop standards in their content areas (Marzano & Kendall, 1996).

The Goals 2000 legislation provided the impetus, the rationale and, in some cases, the funding to support efforts of states and

professional groups to develop standards. Other governmental and non-governmental agencies provided additional leadership and funding in the effort. Goals 2000, with its focus on high expectations and achievement results for all students, became both a national flag to rally around and a source of funding that enabled standards-based school reform to gain momentum. By the late 1990s, professional organizations had developed standards in all content areas, and most states had adopted or revised standards for at least the major content areas.

At the same time, a second movement sought to address the previous failure of top-down reforms by giving local schools greater autonomy. The Restructuring Movement advocated site-based management, which placed greater decision-making authority in the hands of principals, teachers, and parents as opposed to district-level administrators (Bell, 1993). There was the expectation that school-based educators would embrace this movement because they would have more power to initiate and oversee changes in their schools and respond in unique and creative ways to local issues (DuFour & Eaker, 1998). However, Newmann and Wehlage (1995) reported that in the majority of cases, school practitioners focused on peripheral issues that did not directly impact student learning, issues such as student discipline and parent involvement.

Talking about the reforms of the early 1990s, DuFour and Eaker (1998) concluded that

> The paired concepts of establishing national goals and providing local autonomy to achieve these goals seemed to offer a viable alternative to the failed Excellence Movement. National goals could address a national crisis, while job-site autonomy and individual empowerment seemed to be consistent with best practice in the private sector.... Unfortunately, restructuring seems to have left students virtually untouched by the reforms that swirl around, but not within, their classrooms. So the Restructuring Movement, like the Excellence Movement before it, has been unable to make a real difference in the ability of American schools to meet the challenges they face. (p. 6, 9)

DuFour and Eaker suggested that the lack of expected large-scale successes of these reform efforts has left many feeling "despair about the possibility of school improvement in the United States" (p. 9). Teachers, they go on to say, have responded with growing defensiveness and resignation; some education writers have challenged the very premise that schools are ineffective. However, other educators have redoubled their efforts to improve schools, especially in light of the most recent international assessment of student performance.

Third International Mathematics and Science Study (TIMSS)

The 1995-96 Third International Mathematics and Science Study (TIMSS) provided evidence that the nation has not yet reached its goal of being first in the world in mathematics and science achievement. TIMSS tested students from 41 nations at three educational levels to compare math and science achievement. Achievement results for U. S. students were mixed. Fourth graders scored above the international average in both subjects, eighth graders scored below the international average in mathematics and above the average in science, and students in their final year of high school scored below the international average in both subjects.

The TIMSS achievement data supported the push of the standards movement into the accountability phase. Many states have developed high-stakes testing for students and for schools. Schools and teachers are seeing school report cards printed in the newspapers detailing student performance on the state tests and comparing schools in a district or districts in a state. High school students in many states must pass an exam in order to graduate, and schools and teachers are being held accountable for student achievement.

The study also examined student and teacher perceptions, curricula, instruction, and policy issues to understand the educational context in which teaching and learning take place. The study found that the U. S. curricula include more topics than those used in other countries and that the content of U. S. mathematics classes requires less high-level mathematical thought than classes in Germany and Japan. The goal for most U. S. mathematics teachers is to teach students how to do something whereas the goal for Japanese teachers is to help students understand concepts. Teaching practices of Japanese teachers are more aligned with recommendations from U. S. mathematics reformers than the practices of U. S. teachers. Coupled with the achievement data, these results were seen by many as a call to adjust the content being taught in U. S. classrooms and to support teachers' learning of the teaching strategies advocated by reformers.

TIMSS qualitative data also showed that, unlike teachers in the U. S., new Japanese and German teachers undergo long-term structured apprenticeships, and Japanese teachers have more opportunities to discuss teaching-related issues with their colleagues on a routine basis throughout their careers. Research studies in this country support the importance of collegiality, mentoring, teacher inquiry, and teacher reflection as new professional development strategies to improve schools. While the relationship between professional development and student performance has not been adequately studied, early evidence suggests they are positively related and has supported policy changes (Cohen & Hill, 1998). New state policies include adopting standards for teaching; providing induction support for new teachers; providing resources and guidance for school-based professional development; encouraging mission development, planning, and collaboration among school staff; and facilitating school-level autonomy (Hirsch, Koppich, & Knapp, 1998).

So, rather than slowing down, the efforts to improve schools seem to be progressing at a furious pace. However, the focus of new efforts is changing, as is the perception of the teacher's role in reform and in the reformed classroom. In the next section, we will examine this change in direction and look at what needs to happen to improve classroom teaching and learning given that much of the work at the policy level has been completed.

Directions of Change

Over the past few decades, many different perspectives, ideas, opinions, philosophies, and policies have been presented as reform. National, state, district, and local agencies all make educational policy, leading one researcher to say that "the latter half of the twentieth century probably witnessed the enactment of more education policies—maybe several times more—than the whole prior history of schooling back to ancient Greeks" (Loveless, 1998, p. 283). In addition, an astounding number of groups have been involved in changing curriculum, instruction, assessment, graduation requirements, community involvement, school structure, teacher education, and the list goes on. For teachers, it is not easy to decide which directives to listen to and follow. When making these decisions, teachers may try to respond to too many diverse messages and dilute the effect of any one idea. They may choose to listen to the messages of only one reform effort and miss opportunities to provide students with more effective educational experiences. Or they may become confused and resentful and refuse to listen to any of the new messages (Knapp, 1997).

McDermott (2000) states that it is also common for policies and programs to be partially implemented because of the number of institutional interests to be served. Political and public pressures increase the propensity for partial implementation to continue.

Additionally, high staff turnover makes it difficult to apply policy consistently and changes in school administration often result in termination of programs associated with the previous administration.

Are there any clear directions emerging in the area of school improvement? Cohen and Hill (1998) note that by the mid 1980s,

> researchers and reformers had begun to argue for more intellectually ambitious instruction. They contended that teaching and learning should be more deeply rooted in the disciplines and much more demanding. Reformers also began to argue that schools should orient their work to the results that students achieve rather than the resources that schools receive. (p. 1)

They go on to say that by the early 1990s, "many states were moving more forcefully on instruction, and many sought coordinated change in instructional frameworks, curriculum, and assessment" (p. 1).

So, the focus of reform is becoming more clearly aimed at improving instruction and student learning. One strategy of the last decade was the push for coherence in educational policy with the expectation that aligned policy would result in better teaching and learning. As this strategy proved less effective than hoped, the focus has shifted to teachers and their preparation, high-quality teaching, and teacher learning.

The Systemic Approach to School Reform

Systemic school reform, a national focus for educational improvement during the early 1990s, was promoted to address the lack of cohesion typical of previous reform periods. According to this approach, the direction for reform is provided by a common vision informed by "underlying values concerning intellectually stimulating and engaging education for all students" and a set of goals (standards and benchmarks) that can be communicated and measured (CPRE, 1991, p. 6). Key policies are aligned to support outcome expectations (student learning goals). Finally, the governance system is restructured to give schools more flexibility in meeting student needs (CPRE, 1991; Fuhrman, 1993).

Systemic reform, thus, is a policy approach to school improvement that emphasizes high standards, aligned assessments, an accountability system, and site-based management. Fuhrman explained that the approach was "built around two supremely logical notions: societal decision about outcome goals and coordination of important policy instruments" (1993, p. 3). Both the scope and coherence of the efforts and the balance between state and local controls distinguish this approach to reform from those of previous decades. Using the establishment of performance-based standards as the organizing principle, policymakers could evaluate all aspects of the system to see if they promoted the desired outcomes (Blank & Pechman, 1995).

In her book, *Designing Coherent Educational Policy: Improving the System* (1993), Fuhrman shared her understanding of coherent policy:

> The idea of coherent policy is not consistency for its own sake but consistency in service of specific goals for student learning. Coherent policy means giving a sense of direction to the educational system by specifying policy purposes...it means establishing high-quality goals about what students should know and be able to do and then coordinating policies that link to the goals. (p. xi)

Systemic reform is based on several premises: that a major constraint on the quality of teaching is the lack of alignment among elements of the system; that better teaching will result when there is alignment with challenging standards; that the lack of alignment is best addressed at the level at which policies are set; and that systemic reform strategies are not incompatible with local discretion (Knapp, 1997). In the early 1990s, it seemed that the teacher had little direct role in the reform process. The objective was to provide instructional guidance without actually involving the teacher very much.

Initially, some of the new state and professional standards documents contributed to the problems they were supposed to solve by being so "bloated and poorly written...that almost no one can realistically teach to or ever hope to adequately assess" them (Schmoker & Marzano, 2000, p. 19). However, these authors contend that "clear, intelligible standards are a

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pillar of higher achievement" (p. 19). They explain,

> Standards—when we get them right—will give us the results we want...The lesson of TIMSS should considerably diminish the perceived risk of downsizing the curriculum. The very nature of organizations argues that we succeed when all parties are rowing in the same direction. We will realize the promise of school reform when we establish standards and expectations for reaching them that are clear, not confusing; essential, not exhaustive. (p. 21)

The question was, could state and national agencies use aligned instructional policies—assessments, curriculum frameworks, and allocation of resources—to steer teaching and learning in faraway classrooms (Cohen & Hill, 1998).

In a study of the influence of systemic policy on mathematics and science teaching, Knapp (1997) noted that the visions of teaching and learning embedded in the reforms are built around sophisticated and complex ideas, such as constructivism and teaching for understanding. The teacher is assumed to be "the last link in the chain of influence from policy to learning event, that is, the final 'agent' of policy, as well as a target of policy," and classroom practice is assumed to be "under the control of teachers and in some degree reachable by policy" (Knapp, p. 233). Systemic reform has brought a philosophy of instruction, content goals, and new conceptions of the learner to the attention of public and professional audiences (Knapp). Systemic reform has affected requirements and professional ideas, but there has been relatively little investment in building and sustaining support systems for long-term teacher learning (Knapp).

Other researchers have noted similar results. Cohen (1995) found that new policies have generated awareness, but have had a more limited effect on the incorporation of new ideas into practice. He suggests that the systemic reform approach has assumed that instruction is a homogeneous and unified system that can be driven by policy when, in fact, instruction includes several related systems, and changes in one may not produce changes in the others. He concluded that coherence in policy is very different from coherence in practice.

Over time, systemic work at the policy level has come to emphasize the importance of whole-school reforms as opposed to individual-focused remediation (Koppich & Knapp, 1998). New programs and policies have focused on a teacher's role as a school staff member, with responsibility to participate in collective problem solving, decision making, and program implementation. However, developing the capacity of school staffs to work this way has not been adequately addressed (Koppich & Knapp).

Fullan (1996) noted that it is easier to identify effective system changes in the top half, or policy level, of the system—development of goals, curriculum frameworks, and aligned assessments—than in the bottom half, or classroom level, of the system. And indeed, the policy work appears fairly complete across the states, especially with regard to the development and alignment of standards, assessments, and accountability systems. This policy work should help stimulate movement toward defined, desirable goals among school staffs and reduce conflicts among policies that direct local educators. However, the lack of attention to professional development has created a barrier to implementing the changes in practice advocated by the major reform documents (Thompson & Zeuli, 1999). Policy work "has not yet provided coherent, effective guidance on how to improve instruction in the United States" (CRPE, 1996, p. 1).

Providing Teachers with Opportunities to Learn

Policy changes have often ignored the bottom half of the system—the teachers in the classroom. Even when a new policy or program involves new curricular materials and teacher "training" sessions, the conditions for teachers to learn about or develop the knowledge, skills, and beliefs needed to understand the policy or program are rarely adequate (Cohen & Ball, 1999). Reformers have begun to realize the severe consequences of ignoring teacher learning, and newer strategies have directed more attention to providing teachers with opportunities to learn. The federally funded Comprehensive School Reform Demonstration Project (CSRD) established by Congress in 1998, for example, stresses teacher learning as a major component. Even curriculum developers are now producing materials that are more "educative" for teachers with opportunities for teacher learning embedded in the use of the materials, or are using a design/redesign approach to develop materials in conjunction with the teachers who are enacting the curriculum.

Cohen and Hill (1998) developed a model of the relationship between policy and practice, based on their study of California's systemic math reform.

> Students' achievement is the ultimate dependent measure of instructional policy, and teachers' practice is both an intermediate dependent measure of policy enactment and a direct influence on students' performance. Teachers, therefore, figure in the model as a key connection between policy and practice. Teachers' opportunities to learn what the policy implies for instruction is a crucial influence on their practice, and at least an indirect influence on student achievement through teachers' practice. (p. 2)

California state policymakers "made available new and better student curriculum units; they encouraged professional development around these units and reform ideas more generally; and they used the state assessment program both as an example of and as incentive toward change" (p. 24). Cohen and Hill concluded that teaching practice and student learning will improve in the direction proposed by state policy when there is both alignment of curriculum, assessment, and professional development focused on teaching and learning academic content and provision of adequate opportunities for teachers to understand and internalize the changes.

Another study of the same curriculum reform effort found that teachers constructed different understandings of the policy documents and enacted them in quite different ways, leading the researchers to conclude that teacher learning is more complex than simple access to opportunities to learn about reform (Grant, Peterson, & Shojgreen-Downer, 1996). Others have noted that while new programs clearly favor student-centered learning approaches, reformers most often "pursue their goals by being directive with teachers in ways that they discourage teachers from being with children" (Loveless, 1998, p. 288). They may provide professional development that is aligned, coherent, and sustained, but they rarely stray from standard presentational or training modes. They thus sustain the view of "knowledge as facts and skills, teaching as telling, and learning as remembering" (Thompson & Zeuli, 1999, p. 353).

Wilson, Peterson, Ball, and Cohen (1996) studied systemic reform in three states. They concluded that reform-related learning is best facilitated when concrete classroom examples and experiences are used to ground the conversation about practice; inquiry and reflection are components of the learning; people from different parts of the system come to the table to talk together; and all of the actors view themselves as learners. Whereas much of this

work started by examining the enactment of specific reforms, it has led these researchers and others to develop a broader view of professional development as teacher learning.

Improving the Quality of Teaching through Teacher Learning

The current wave of school reform is thus focused on "improving the *quality* of teaching through, for example, better teacher preparation and higher quality, more relevant professional development" (Hirsch, Koppich, & Knapp, 1998, p. i). Changes in the views of how students construct knowledge have influenced the understanding of how teachers learn about teaching. The vision of schools as professional learning communities is also important in this context, and the social organization of instruction—collegiality and collaboration—is now more commonly described as an important element in building new capacity for school improvement (CPRE, 1996).

Much of the conversation and literature about school improvement places an emphasis on learning—student learning and teacher learning—as the focus or lens for decision-making about teaching practice. The view of learning that has been widely accepted by the educational research community in recent years is the constructivist view. Constructivism is a multifaceted theory that suggests that knowledge is personally and actively constructed by the individual through experience and language; the learner constructs meaning by making connections between previous experiences and conceptions and the new learning situation; and social interaction is essential for learning to take place as students discuss and test their ideas with other learners. Students are, thus, better able to construct meaning and to develop deep understanding when teachers create opportunities for students to have hands-on experiences, to go into depth on important topics, to work with

other students in varied groupings, to make real-world connections, to purposefully access their own prior knowledge, and to integrate concepts across subjects.

This view of learning is a radical departure from the behaviorist view of learning that was prevalent when many of today's teachers were preservice students. Since a theory of learning essentially drives the development of teaching practice, understanding constructivist ideas requires teachers to engage with new ideas, reflect on their practice, and to deeply rethink teaching, learning, and the teacher's role in the classroom. In the past, teacher learning has been primarily additive learning that augments the teacher's repertoire with new skills. The kind of teacher learning that reformers are now talking about is quite different. It is "transformative" learning that produces changes in deeply held beliefs, knowledge, and habits of practice (Thomson & Zeuli, 1999). Cohen and Ball (1999) are describing this kind of learning when they said that if we can "enable teachers to change *what they* see in students' work" (italics added, p. 9), then we are likely to see distinctive changes in teaching practice and student learning. They talked about the connection between teacher learning and change in instruction this way.

> Helping teachers hear and see more in student work, helping teachers learn to intervene artfully in student work and to motivate students, all affect what students can learn to do. The most effective teacher learning is likely to focus on "instruction-as-interaction, rather than on isolated elements of instruction. (p. 28)

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The new role of the teacher in reform and in classrooms is as a learner. New interventions "have been invented" that focus more clearly on providing meaningful learning experiences for teachers (Cohen & Ball, 1999, p. 1). Many of these interventions stress collegial relationships among teachers where teachers have opportunities to share ideas, discuss educational issues, and participate in collaborative planning, problem posing, and problem solving. There is, thus, an emergence of support for teacher study groups, book discussion groups, whole-faculty study, mentoring programs, induction programs, and numerous other teacher-directed, site-specific forms of professional development.

These learning experiences can be transformative for teachers. Thompson and Zeuli (1999) have described five characteristics for transformative professional development. Learning opportunities should

1. Create a sufficiently high level of cognitive dissonance to disturb the equilibrium between teachers' existing beliefs and practices on the one hand and their experience with subject matter, students' learning, and teaching on the other.
2. Provide time, contexts, and support for teachers to think—to work at resolving the dissonance through discussion, reading, writing, and other activities.
3. Ensure that the dissonance-creating and dissonance-resolving activities are connected to the teacher's own students and context, or something like them.
4. Provide a way for teachers to develop a repertoire for practice that is consistent with the new understanding that teachers are building.
5. Provide continuing help in a cycle of surfacing new issues and problems, deriving new understanding from them, translating these new understandings into performance, and recycling.

Some researchers are actively studying the connection between teacher learning and student learning. Preliminary results suggest that student performance increases when teachers have greater learning opportunities (Cohen & Hill, 1998). These authors said that

> When educational improvement is focused on learning and teaching academic content, and when curriculum for improving teaching overlaps with curriculum and assessment for students, teaching practice and student performance are likely to improve. (p. 33)

If the reform utilizes constructivist learning theory to formulate student curriculum, for example, then the learning opportunities for teachers must also be designed around constructivist ideas. Further, these learning opportunities should be firmly grounded in developing deeper knowledge of the student curriculum, of the relationship of assessments to curricula, and of the relationship of both to pedagogy and student learning (Cohen & Hill).

Schools and districts have begun to engage in reform efforts that focus on teacher learning, and some of those that have been most successful in improving student achievement have been recognized by the U. S. Department of Education's National Award Program for Model Professional Development (Killion, 1999). In award winning schools, Killion found that teachers engage in diverse and extensive learning experiences that they, individually or as teams, have selected; time, resources, collaboration, focused goals, support structures, and leadership are in place to foster teacher learning; analysis of data keeps the school focused on results; and all teachers are responsible for contributing to successful professional development and are accountable for student success. These results again focus attention on the teacher as a learner and as an active and knowledgeable actor in the reform process.

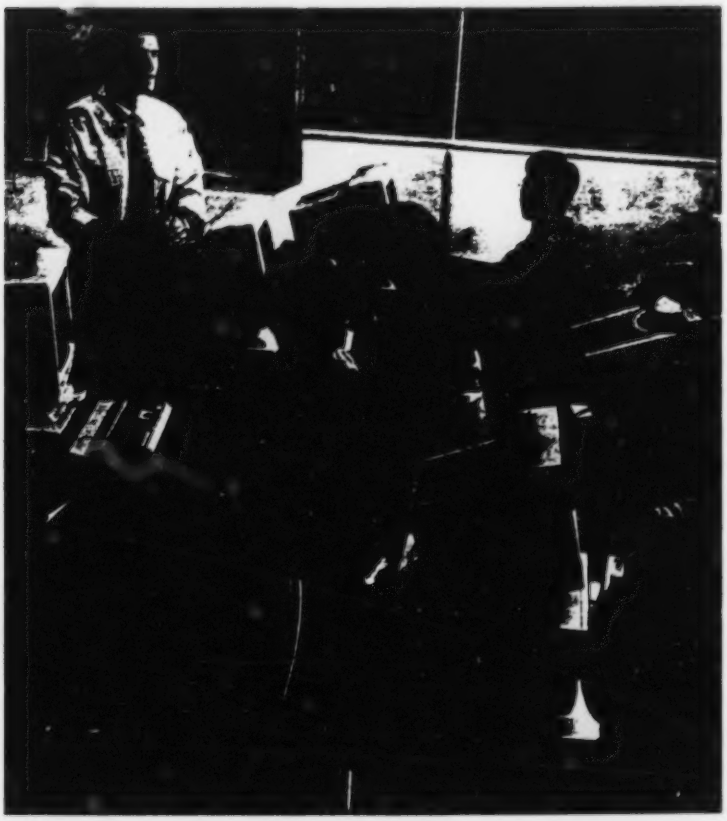
A Focus on Student and Teacher Learning

Much of the work has been done—on standards, assessments, professional development, accountability, policy alignment, community, parent involvement, technology, and more—and much of this work has been driven by a growing consensus that school improvement must focus on student learning and quality teaching. We have a better understanding nationally of the educational issues and a more complete vision of what effective schools look like. There is a growing consensus that schools should function as professional learning communities in order to promote student learning (DuFour & Eaker, 1998; Hord, 1997; and Little, 1997). More and more, teachers are seen as professionals who need learning opportunities because it is important for them to understand proposed changes in order to transform their practice. The "growing pressure on teachers necessitates rethinking their job description and what the teaching role entails" (Lieberman & Miller, 2000, p. 51). People at all levels are beginning to look at how to *support* quality teaching through redesign of teacher education and induction, restructuring of professional development, promotion of professional standards for teaching, changes in recruitment and reward systems, and changes in the culture of schooling. There is a general realization that teachers can't simply be recipients of reform packages, but must be active partners in the process of changing schools.

School improvement poses challenges for the teacher since it is the teacher who must make the new ideas and policies real in the classroom. That is, the teacher has to bring the components of the system—curriculum, instruction, assessment, external mandates, and community context—together intentionally with a focus on student learning to create a coherent practice that hangs together as a meaningful learning experience for students. Elmore (1996) has argued that reforms will have little impact on how and what children learn unless there are also changes in the "core" of educational practice, that is, in how teachers understand knowledge and learning and how they operationalize their understandings. So, teacher understanding becomes the critical piece in reform.

While policy can influence the nature of the work of teaching and learning, teachers must construct their own understandings of the policy from personal, political, professional, and social standpoints. Coherence is not a matter of simply aligning everything, it is a matter of teachers making sense of the instructional relationships—interactions among teachers, students, knowledge, and materials—in ways that impact the core of educational practice (Cohen & Ball, 1999). Therefore, in much the same way that constructivism is used to understand and improve classroom instruction for students, constructivism can also be used to understand how teachers create coherent practice based on the understandings of learning, learners, materials, and so on that they have built.

This final section examines the recent approaches to school improvement that might support teachers as they rethink their roles or positions relative to six dimensions that we have identified as being important in creating coherent teaching practice: knowledge, professionalism, collaboration, instruction, agency, and authority (Finley, Marble, Copeland, & Ferguson, 2000). In our work, we



talk about conditions that support teachers in developing a stance toward each of these dimensions that is clearly focused on learning and the learner. Stance can be thought of as a position one takes in relation to something or someone (Cochran-Smith, 1994) or as an attitude toward or relationship with something or someone (Marble, 1997). Other researchers and policymakers are working along similar lines as evidenced by research and policy work in each of these areas.

Teachers and Knowledge

A consistent theme of reform is that teachers must "be well educated, especially in the subject matter content they teach, and that their career-long professional education experiences must continue to be grounded in the centrality of that content" (Shulman, 1999, p. xiii). In order to be an instructional coach, it is important for teachers to have a deeper understanding of subject matter. The teacher must also "be a scholar, an intellectual, and a knowledge worker oriented toward the interpretation, communication, and construction of such knowledge in the interests of student learning" (Shulman, p. xiii).

Reform efforts call for commitment to a vision that emphasizes deep understanding and meaningful learning rather than transmission and reproduction of declarative knowledge. This new focus applies to classroom learning environments for students and to professional learning for teachers. The "heart of the reforms" is that "in order to learn the sorts of things envisioned by reformers, students must think...students do not get knowledge from teachers, or books, or experience with hands-on materials. They make it by thinking, using information and experience" (Thompson & Zeuli, 1999, p. 347). And in order to understand how to support students' thinking, teachers must also think because the reform calls "for very deep changes—even a transformation—in teachers' ideas about and understanding of subject matter, teaching, and learning" (Thompson & Zeuli, p. 350).

So there has been a real paradigm shift on two levels. First, we see a changing view of what counts as knowledge and how that knowledge is generated. The shift from the view of knowledge as objective and revealed to the view of knowledge as personally and socially constructed has implications for how and what teachers teach and students learn, as well as for how and what teachers learn. For teachers who still think of knowledge as discrete bits of information about a particular subject, student learning is the acquisition of these pieces of information through repetition, memorization, and testing of recall (Elmore, 1996). For teachers who have shifted their view of knowledge, student learning has more to do with understanding concepts and being able to use their understanding to solve problems. Secondly, we see a shift from the view of the teacher as a technician to the vision of the teacher as a learner, as a thoughtful practitioner, as a creator of knowledge. This newer view is becoming part of the national conversation

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about school improvement as educators consider the nature of knowledge, of knowing, and of learning.

Cochran-Smith and Lytle (1999) discuss three conceptions of knowledge and teacher learning that drive reform initiatives intended to promote teacher learning. Each conception has specific assumptions and implications. *Knowledge-for-practice* assumes that university researchers generate content and pedagogical knowledge for teachers to use. A distinctive knowledge base is assumed to exist for teaching; teaching is applying received knowledge in a classroom situation. "Teachers are knowledge users, not generators" (p. 257). Many reforms use this conception of knowledge, centering efforts on teachers learning new content, strategies, or skills, often through direct instruction. The following initiatives are based on knowledge-for-practice: evaluation of teacher preparation programs by the National Council for the Accreditation of Teacher Education (NCATE); professional development initiatives based on teachers learning "best practices" from certified trainers; and teacher certification examinations that assess subject and pedagogical knowledge that are decontextualized from the contexts of teaching.

Knowledge-in-practice assumes that practical teaching knowledge comes through experience. Thus "teaching is a wise action in the midst of uncertain and changing situations" (Cochran-Smith & Lytle, 1999, p. 266), and teaching expertise comes from the profession itself. Research in this area describes craft knowledge and personal practical knowledge. Teachers are understood to be the generators of knowledge who mediate ideas, construct meaning, and take action based on that knowledge. Reforms using this conception hinge on teacher reflection and inquiry on practice, and utilize strategies such as mentoring, coaching, study groups, and self-study. This conception underlies the National Board for Professional Teaching Standards, which use journals, portfolios, and other means to assess the professional knowledge and skill of experienced teachers.

Knowledge-of-practice assumes that teachers play a central role in generating knowledge of practice by "making their classrooms and schools sites for inquiry, connecting their work in schools to larger issues, and taking a critical perspective on the theory and research of others" (Cochran-Smith & Lytle, 1999, p. 273). The teachers' relationship to knowledge is different from the previous conceptions in that they become researchers, theorizers, activists, and school leaders who generate knowledge for the profession and they also become critical users of research. Reforms taking this view focus on teacher research, action research, and inquiry communities. Initiatives include preservice programs that prompt prospective teacher to examine their autobiographies, write critical reflections, or create ethnographies; self-study in higher education; professional development schools; teacher networks such as the National Writing Project; and funding and disseminating teacher research. From Cochran-Smith and Lytle's work, it is clear that a changing or emerging view of what counts as knowledge for teaching influences the way teacher learning opportunities are conceived.

Teachers as Professionals

That the teacher is critical to school improvement is apparent in the report released in 1996 by the National Commission on Teaching and America's Future, *What Matters Most: Teaching for America's Future*. The report states, "What teachers know and can do makes the crucial difference in what children learn." The Commission offered five key recommendations: raise student and teacher standards; reinvent teacher preparation and professional development; revitalize teacher recruitment; reward teacher knowledge and skill; and reorganize schools to maximize student and

teacher success (Hirsch, Koppich, & Knapp, 1999). The Commission appears to be considering teaching as a profession that needs higher status for its members.

Where teachers are viewed as professionals, there is an emphasis on providing them with high-quality preparation and professional learning opportunities and on creating schools that function as professional learning communities and support teachers' success. Teachers' work used to be described as technical work, with the expectation that teachers would be successful if they mastered a prescribed set of skills and techniques. This view is fading as researchers carefully examine teacher education programs. Those that focus on methods courses and a short period of student teaching "failed to incorporate new understandings from research on teaching and learning and took little cognizance of emerging research-based conceptions of teaching as a many-faceted, intellectually-demanding enterprise" (Koppich & Knapp, 1998, p. 17).

Research is providing fuel for the development of a better infrastructure for the profession of teaching. Studies have shown the importance of attending to the beliefs of prospective teachers about schooling and teaching; linking subject matter knowledge and pedagogical knowledge; and providing extended, well-mentored field experiences (Koppich & Knapp, 1998). These authors also noted that creating a true profession of teaching requires the development and implementation of high standards for entry into practice. Some states and professional organizations have been active in creating these teaching standards. Elmore (1996) has elaborated on this idea, calling for strong external normative structures for practice. These structures include, but are not limited to, standards of practice such as those developed by the National Council of Teachers of Mathematics (NCTM) or the National Board for Professional Teaching Standards. These external norms are important, "because [they] institutionalize the idea that professionals are responsible for looking outward at challenging conceptions of practice, in addition to looking inward at their values and competencies" (Elmore, p. 19).

States are beginning to use these findings to think about what teachers should know and be able to do. Some have upgraded certification and licensure policies in order to exert influence over colleges and universities to improve their teacher preparation programs and, thus, the quality of new teachers. Some states have increased salaries, restructured salary schedules, and changed recruitment strategies in order to attract and reward good teachers. Some have introduced induction programs, provided new guidelines and support for professional development, and provided support for local efforts to improve the workplace (Hirsch, Koppich, & Knapp, 1999). Although these are policy responses, they tend to increase the professional standing of teachers by changing teacher preparation institutions and the incentives and conditions of their work and careers as professional teachers (Koppich & Knapp, 1998).

Lieberman & Miller (2000) described the new professional teacher: "As researchers, meaning-makers, scholars, and inventors, they establish a firm professional identity as they model the lifelong learning they hope to infuse in their students" (p. 52). As this picture becomes more common, we can expect teachers to think of and experience teaching more as a profession than as a job.

Teachers, Collaboration, and Collegiality

Reform efforts emphasize collaboration between teachers, between students, and between teachers and students. Members of the school community are better supported to change practice when they are not isolated or in competition with each other. Many books, journal articles, and research reports promote

the value of collegiality, collaborative teams, and professional learning communities. The idea is that teachers' relationships with other adults in the school can have profound consequences for both the teachers themselves and for their students. On a related issue, there is also an increased call for school people to develop collaborative relationships with parents and other community members, and many reform evaluation plans look for evidence of this effort.

It is important to highlight some of the kinds of things researchers are saying about collegiality and professional learning communities. Hord (1997) defined a professional learning community as a school in which the administrators and teachers continuously seek and share learning to increase their effectiveness for students, and act on what they learn. Based on her research and review of the literature, Hord characterized these communities has having shared and supportive leadership; shared values and vision; collective learning and application of learning; supportive conditions; and shared personal practice. Many significant outcomes for both staff and students have been seen when a school is organized in this way (Hord).

McLaughlin and Talbert (1993) found that teachers' professional orientation is a function of their social and professional relationships with other teachers. They said,

> The relationships between students, teachers, and subject matter are the stuff of schooling. The way in which this stuff plays out in particular classrooms or school environments depends most of all...on the character of the up-close professional community to which teachers belong (p. 98).

The isolation that most teachers experience can be devastating. When teachers are members of supportive communities, they can receive support, learn from each other, and gain confidence to try new things. Community is more than collegial interaction, however, it is collegial interaction about teaching and learning that is grounded in the specifics of the classroom.

Newmann and Wehlage (1995) said that creating a professional community that has a positive impact on teaching and learning is more than simply making structural changes. It is "a daunting task, but well worth the effort. We found that students in schools with higher levels of professional community learn more...[However] The critical human norms and skills cannot be mechanically engineered by implementing new organizational structures" (p. 51-2). DuFour and Eaker (1998) noted that "virtually all contemporary school reformers call for increased opportunities for teacher collaboration" (p. 117). However, the tradition of teacher isolation is so entrenched in schools that fostering a collaborative environment represents a significant challenge. DuFour and Eaker suggested that four critical prerequisites must be addressed: time for collaboration must be built into the school day; purpose of collaboration must be made explicit; training and support must be provided; and educators must accept their responsibility to work together as true professional colleagues.

Darling-Hammond and Ball (nd) state that the best way to improve both teaching practice and teacher learning is to create the capacity for better learning about teaching *as part of teaching*. In their analysis of state reforms, they found that some states have enacted policy to restructure professional development around teacher collaboration and inquiry by providing funding to support teacher study groups, networks, teacher research, teacher-directed professional development, teacher collaboration with universities, and teacher academies.

Teachers and New Ideas about Instruction

Curriculum, not instruction, was the focus of attention of educators until the 1970s (Marzano, 2000). During the 1980s and 1990s, the emphasis moved from

1. teaching behaviors, such as questioning students, organizing groups, assigning homework, to
2. learning strategies, such as the K-W-L strategy which involves having students identify what they know about a topic, what they want to know, and what they learned, to
3. instructional models, such as mastery learning, cooperative learning, direct instruction, and, most recently, and finally to
4. conceptions of instruction informed by constructivist learning theory or brain research. (Marzano)

Teachers tend to have a good understanding of many aspects of the first three areas of emphasis, but often poorly understand constructivist learning theory and brain research. However, books on these subjects seemed to have become "popular" reading for practitioners during the late 1990s. *In Search of Understanding: The Case for Constructivist Classrooms* (Brooks & Brooks, 1993), *A Different Kind of Classroom: Teaching with Dimensions of Learning* (Marzano, 1992), *A Celebration of Neurons* (Sylwester, 1995), and *Teaching with the Brain in Mind* (Jensen, 1998) are just a few of the books that could be mentioned. Their popularity indicates teacher interest and, when combined with teacher learning strategies such as study groups and book study, these books may help teachers improve instruction.

The academic standards created by professional organizations and states not only provide information on what students should learn, but also illustrate instructional approaches that have proven to be most successful in supporting their learning. These approaches are student-centered and reflect new views of learning and of teaching. The teacher is cast as an instructional coach, a co-learner, or a facilitator, rather than as a conduit of knowledge in a teacher-centered classroom. For example, NCTM released its *Curriculum and Evaluation Standards for School Mathematics* in 1989 that described what students should know and be able to do. This was followed in 1991 with the *Professional Standards for Teaching Mathematics*. This document illuminated a shift in the vision of mathematical instruction. It specifically addressed the decisions a teacher makes around setting goals and selecting or creating mathematical tasks; stimulating and managing classroom discourse; creating a classroom environment; and analyzing student learning, the mathematical tasks, and the environment in order to make ongoing instructional decisions. Standards for other subjects released by professional organizations and many states also include standards for teaching which describe new views of instruction.

Cohen and Ball (1999) present a comprehensive analysis of instructional capacity. According to their analysis, school reform intervention "includes extensive work on two fronts: reconfiguring instruction and its environments" (p. 17). The interventions that are more likely to succeed are those that best deploy the elements conventionally associated with instruction. The list of elements is rather long and includes teachers; learners; curriculum; framing of the curriculum in light of an understanding of the learners and what they bring; opportunities to learn, practice, revise, and reflect; examples of successful performance; support of peers; and more. Understanding what is involved in improving instruction is a first step for reformers, but changing instruction remains a complex issue. Cohen and Ball express the notion that intervention (be it a new instructional strategy,

curriculum, standards, assessment, or policy) is a form of instruction for teachers. If teachers are to make use of the resources and ideas that reformers bring, then reformers must help the teachers understand the innovation by working with them.

Teachers' Agency

The word "agency" is used to bring together the ideas of power and action—teachers must believe that they have the power to take action and that their action will impact student learning before they are likely to make significant changes to their practice (Finley, Marble, Copeland, & Ferguson, 2000). Power can be thought of in two very different ways. On the one hand, power is described as the possession of control or authority over others, as is typical in hierarchical organizations including most schools. Teacher empowerment is a top-down process where power is granted by the administration. On the other hand, power can also mean the ability to act or produce an effect (Spielmann & Radnofsky, 1997). The latter definition is more useful in the understanding of agency.

The empowerment literature includes many references to the conditions of schooling that deny teachers a sense of efficacy, success, and self-worth (Terry, 1995). Many reports have documented the inadequacy of hierarchical, top-down organizational structure in the corporate world and in the world of public education, and have described characteristics of school principals who have successfully transformed their schools to a flatter organizational structure. Teacher empowerment has been described as the development of an environment in which teachers act as professionals and are treated as professionals, where they have the power to make decisions that were made for them in traditional systems (Terry). This view indicates the complexity inherent in moving more decision-making responsibility into the hands of teachers. Empowerment of teachers, in the sense of creating a specific kind of working environment, may be necessary for teachers to develop a sense of agency, but it is not sufficient.

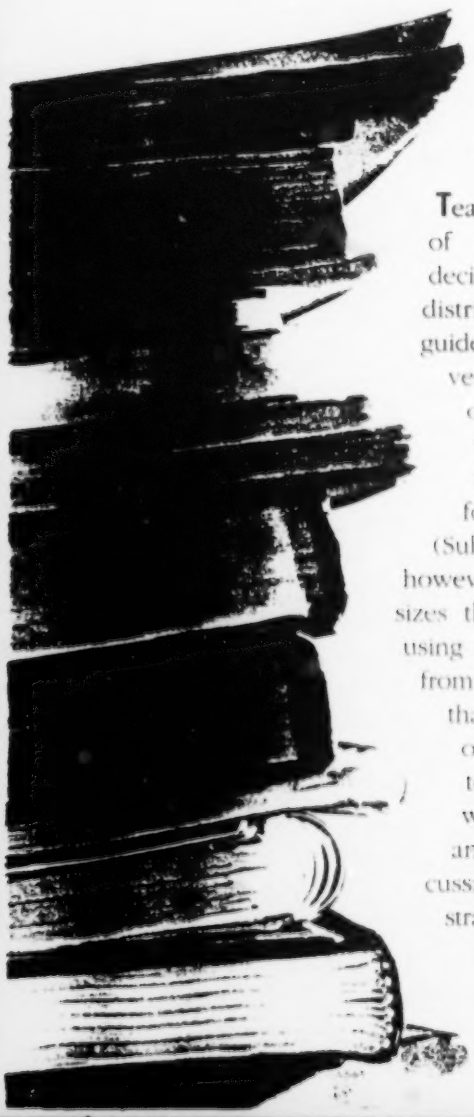
Spielmann and Radnofsky (1997) studied a school reform program intended to empower teachers to make choices about their own development, evaluation, and working relationships. The premise of the program was that giving teachers more power could induce professionalism, and more professional teachers would take on new responsibilities and improve instruction. The authors found that the program developers had made some false assumptions: neglecting to distinguish between having power over someone and having the power to act; treating power quantitatively as a one-dimensional commodity; and equating empowerment with professionalism without establishing a correlation between power and responsibility. Teachers who are "given" power (being-able-to-do) often respond by exercising independence (being-able-not-to-do) rather than carrying out the intentions of the reform. The developers had established procedures to foster a goal of more democratic decision-making, but they had assumed that this was what the teachers wanted and had not taken concrete measures to foster the development of a new professional and democratic school culture. The teachers had not been involved in open, reflective dialogue about what it meant to be a professional, to take responsibility, and to have power to act.

The teacher leadership literature offers more on the idea of agency. In traditional settings, teachers are most often cast in the role of managers, directing and controlling student activities in the classroom, and following the rules set by the administration (Suleiman & Moore, 1996). As a teacher moves out of the managerial paradigm into an active leadership role, they become decision-makers, planners, and collaborators who tend to be more

reflective, responsible, and empowered (Suleiman & Moore). These authors stated that,

> The teacher as a leader tends to be active and research-oriented in the classroom. This provides teachers with the vehicle to put them in charge of their craft and its improvement...This alternative construct views teachers as pivotal leaders in the schools as agents of positive educational reform. (p. 10)

Teachers who are leaders in this sense have developed agency—they believe that they have the power to act and that their actions will have an impact.



Teachers' Sources of Authority

Teachers call on many sources of authority when making decision—textbooks, state and district policies, curriculum guides, teaching manuals, university professors, and their own experience in the classroom. Those who see their role as a manager tend to follow the dictates of others (Suleiman and Moore, 1996); however, recent literature emphasizes the importance of teachers using the knowledge that comes from their own experience and that of colleagues. TIMSS and other studies have described teachers in other countries whose learning from one another by watching, discussing, reflecting, trying new strategies, and so on, is built into the expectations and structures of teaching. "Teachers share knowledge and refine practice throughout their careers" (Darling-Hammond, 1998, p. 10). In this country, some kinds of opportunities for teachers to learn in communities of their peers have led to improvement in practice as teachers build their knowledge of practice and gain confidence to look to the authority of that knowledge when making decisions. Darling-Hammond lists characteristics of teacher learning opportunities that have this effect as being experiential; grounded in teachers' questions, inquiry, and experimentation; collaborative; connected to and derived from teachers' work with students; sustained and intensive; and connected to other aspects of school change.

Firestone and Pennell (1997) illustrate the relationship between agency and authority in a study of two state-sponsored teacher networks. The benefits of the networks were said to be increased teacher learning, strengthened motivation, and enhanced empowerment. The authors talked about empowerment.

> The least controversial (and perhaps most significant) is the enhanced sense of efficacy teachers develop in the classroom as their content and pedagogical knowledge grows...teachers may develop a deeper knowledge of the theoretical and normative underpinnings of the changes they make [so] there is a potential for an increased sense of purpose....Networks may help teachers voice their informed dissent from the "knowledge" of experts and the policies of those in positions of authority. (p. 239, 240)

Thus, as teachers learn more about content, pedagogy, and reform, they develop confidence in their own authority as they advance their views of good practice.

Conclusion

The current wave of educational reform is clearly focused on improving student learning. From a policy perspective, this involves aligning policies and recommendations to send classroom teachers consistent messages about the different aspects of instructional practice. We must not lose sight of the fact, however, that policy is just policy until it is incorporated into teaching practice. New understandings about how children learn have informed reform efforts while at the same time challenging teachers to rethink their teaching practice. Teachers must have time and support to understand and accommodate these new visions with their experiences of practice.

The key to the success of school improvement is in the implementation of reform ideas by teachers, which in turn depends on teacher learning. The reform movement provides an opportunity, indeed the necessity, for teachers and others to re-examine and think deeply about teaching and learning in light of new research on learning and new perspectives on educational practice. The support needed to move new ideas into changed practice is beginning to be provided; many consider this support an absolute necessity if we expect teachers to construct coherent practices reflective of the reform messages. There is an emerging focus on improving the quality of teaching through teacher learning, while still maintaining the goal of improving student learning.

Much has been written about the importance of developing a profession of teaching, and strategies are being advanced to support this goal. When teachers are treated as professionals, they will come to think of and experience their work as professionals. As long as teachers are actively involved in the development of a more professional and democratic school culture, it is likely they will take on additional responsibility for their own growth and learning and that of their students. Research studies provide evidence of the important influence of collegiality, collaboration, and professional learning communities on teacher and student success. These relationships are becoming more highly valued and promoted across all levels of education. As teachers have more opportunities for positive, professional interactions with colleagues—interactions focused on students and their learning—they are likely to view these interactions as learning experiences.

New conceptions of knowledge and learning are making their way into the dialogue on school reform. Knowledge is no longer considered a commodity that one dispenses to learners, but rather, as something that individuals construct and create from their own experience with materials, ideas, text, other individuals, and so on. This changes how instruction is viewed, at the level of preservice education and teacher professional development as well as at the K-12 level. Reformers are advocating new approaches to teacher education and development based on constructivism, and reform programs are utilizing these ideas in developing materials, curriculum, standards, etc., for use in classrooms. As teachers experience these ideas of knowledge, learning, and instruction in their own learning situations, they are more likely to view themselves and their students as meaning-makers and incorporate new instructional strategies in their classrooms.

Finally, there is recognition that teachers are a critical link between reform ideas and improved student learning. As views of educational leadership encompass new understandings from the corporate world, the relationship between school administrators and teachers is changing. One early approach was the site-based management movement, with teachers given a greater role in policy decisions at the school level. This effort tended to simplify power relationships and overlooked the experiences that teachers and principals would need to make authentic changes in decision making. More recently, researchers have noted the importance of school culture in influencing

teachers' belief that they have the power to take action to improve practice and student learning. As a school develops into a learning community or develops a professional and democratic culture, it is expected that teachers will take more responsibility to make professional decisions.

As more emphasis is placed on providing teachers with authentic learning experiences, they will come to value and use their own knowledge of teaching and learning. Many approaches to teacher learning focus on critique and reflection, so it is anticipated that teachers will become more sophisticated in their analysis of their own teaching practice and needs for new professional learning experiences. Reliance on their authority does not imply that teachers should reject other sources of authority, but that they should become more critical consumers as they make informed decisions about curriculum, instruction, and assessment.

Our work in professional development and applied research takes place in this reform environment. Our assumptions and approaches, as we conducted a recent research project, were formed in this context. For example, we assumed that teachers are learners who construct their own understanding of teaching and learning and that teachers should be active partners in generating knowledge of teaching. From recent research and policy work in school reform, we saw that instructional decision making should be clearly focused on students and learning. Teachers make sense of the policies and practices being promoted through personal, professional, and social efforts; activities, such as dialogue with peers, classroom research, and reflection, support teacher learning.

We posit that teachers' success in making coherent instructional decisions depends on developing a position or stance on six dimensions—authority, agency, professionalism, collaboration, knowledge, and instruction—that is focused on learning and the learner. Stance is a way of positioning oneself in relation to something or someone, or an attitude or relationship toward something or someone (Cochran-Smith, 1994; Marble, 1997). Having a stance that puts learning in the center gives teachers a way to make sense of and sort out the various choices (ideas, directives, and so on) when they make instructional decisions.

...teachers' success in making coherent instructional decisions depends on developing a position or stance on six dimensions—authority, agency, professionalism, collaboration, knowledge, and instruction—that is focused on learning and the learner.

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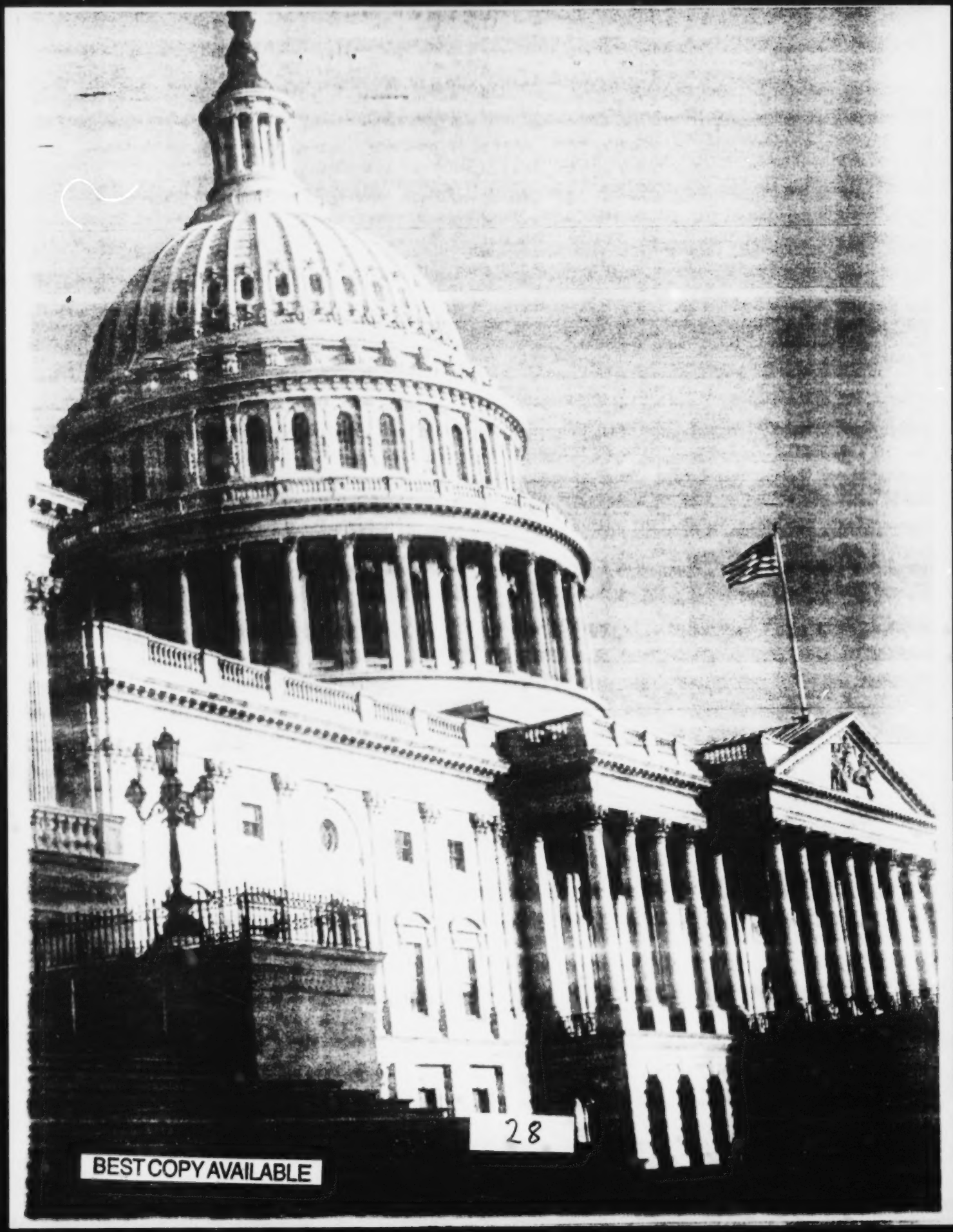

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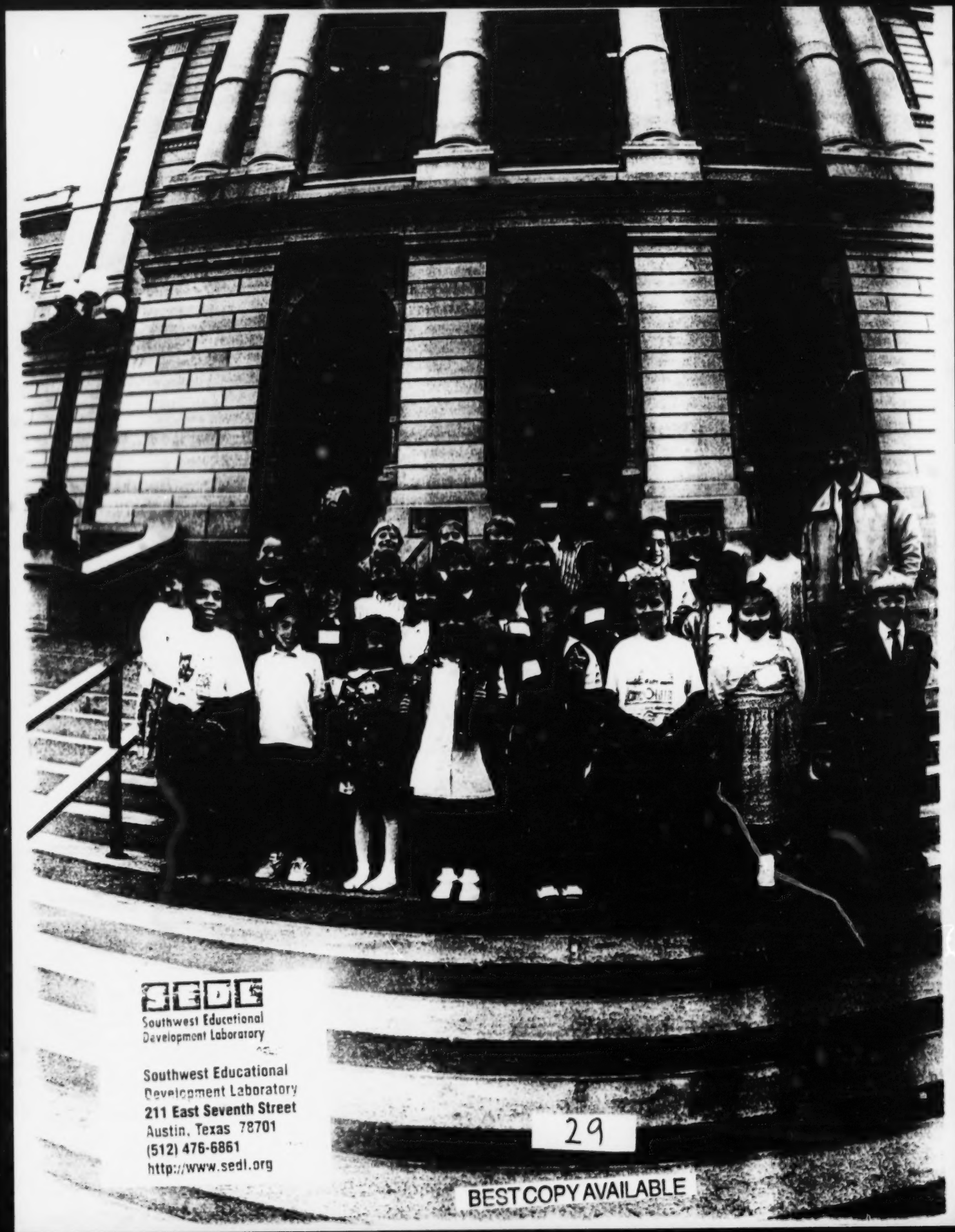

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